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1994

## Nebraska Summary: S156 John Deere 6300

Nebraska Tractor Test Laboratory

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# SUMMARY OF OECD TEST 1524/2—NEBRASKA SUMMARY 156

## JOHN DEERE 6300 SYNCHRO-PLUS DIESEL

### 12 SPEED

#### POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed—1042 rpm)</b>					
77.6 (57.9)	2300	4.45 (16.86)	0.393 (0.239)	17.43 (3.43)	
<b>Standard Power Take-off Speed (PTO—1000 rpm)</b>					
79.5 (59.3)	2208	4.49 (17.00)	0.386 (0.235)	17.72 (3.49)	
<b>Maximum Power (2 hours)</b>					
79.8 (59.5)	2100	4.44 (16.81)	0.381 (0.232)	17.97 (3.54)	

#### VARYING POWER AND FUEL CONSUMPTION

77.6 (57.9)	2300	4.45 (16.86)	0.393 (0.239)	17.43 (3.43)	Air temperature
67.6 (50.4)	2358	4.08 (15.44)	0.413 (0.251)	16.57 (3.27)	68°F (20°C)
51.6 (38.5)	2390	3.40 (12.87)	0.452 (0.275)	15.18 (2.99)	Relative humidity
34.5 (25.7)	2406	2.75 (10.40)	0.546 (0.332)	12.54 (2.47)	25%
17.5 (13.1)	2419	2.07 (7.85)	0.810 (0.493)	8.45 (1.66)	Barometer
.....	2443	1.41 (5.34)	.....	.....	29.5" Hg (100.0 kPa)
.....			.....	.....	

Maximum Torque 233 lb.-ft. (316 Nm) at 1599 rpm

Maximum Torque Rise 31.7%

Torque rise at 1800 engine rpm 28%

#### DRAWBAR PERFORMANCE (UNBALLASTED—FRONT DRIVE ENGAGED) FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>Maximum Power 6th (1C) Gear</b>									
62.5 (46.6)	5465 (24.30)	4.29 (6.91)	2300	8.2	0.490 (0.298)	14.11 (2.78)	180 (82)	32 (0)	29.7 (100.5)
<b>75% of Pull at Maximum Power 6th (1C) Gear</b>									
49.9 (37.2)	4110 (18.28)	4.55 (7.32)	2368	5.7	0.526 (0.320)	13.15 (2.59)	178 (81)	32 (0)	29.7 (100.5)
<b>50% of Pull at Maximum Power 6th (1C) Gear</b>									
34.2 (25.5)	2730 (12.14)	4.70 (7.57)	2397	3.7	0.621 (0.378)	11.12 (2.19)	176 (80)	32 (0)	29.7 (100.5)
<b>75% of Pull at Reduced Engine Speed 7th (3B) Gear</b>									
50.0 (37.3)	4125 (18.35)	4.55 (7.31)	2085	5.3	0.483 (0.294)	14.29 (2.81)	176 (80)	32 (0)	29.7 (100.5)
<b>50% of Pull at Reduced Engine Speed 7th (3B) Gear</b>									
34.3 (25.6)	2730 (12.15)	4.71 (7.58)	2122	3.4	0.567 (0.345)	12.18 (2.40)	172 (78)	32 (0)	29.7 (100.5)

**Location of Test:** DLG Testing Station for Agricultural Equipment, Max-Eyth-Weg 1, D-64823 Gros Umstadt, Germany

**Dates of Test:** January to June, 1994

**Manufacturer:** John Deere Werke Mannheim D-68008, Mannheim, Germany

**FUEL and OIL:** Fuel No. 2 Diesel Cetane No. NA Specific gravity converted to 60°/60° F (15°/15°C) 0.823 Fuel weight 6.85 lbs/gal (0.821 kg/l) Oil SAE 10W40 Oil consumption for 10 hours NA Transmission and hydraulic lubri-cant John Deere Hy-Gard SAE 75 Front axle lubricant SAE 80W/90 API GL-5

**ENGINE:** Make John Deere Diesel Type four cylinder vertical with turbocharger Serial No. CD 4039 TL007 10 19 67 Crankshaft lengthwise Rated engine speed 2300 Bore and stroke 4.19" ∞ 4.331" (106.5 mm ∞ 110.0 mm) Compression ratio 17.2 to 1 Displacement 239 cu in (3920 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil Fuel filter one paper element Muffler underhood Exhaust vertical Cooling medium temperature control thermostat and variable speed fan

**CHASSIS:** Type front wheel assist Serial No. 1000 38 Tread width rear 63.5" (1612 mm) to 75.3" (1912 mm) front 59.7" (1516 mm) to 79.4" (2016 mm) Wheel base 94.5" (2400 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.42 (2.28) second 1.98 (3.19) third 2.62 (4.21) fourth 2.85 (4.58) fifth 3.98 (6.41) sixth 4.64 (7.47) seventh 5.26 (8.46) eighth 6.49 (10.45) ninth 8.57 (13.79) tenth 9.98 (16.05) eleventh 13.96 (22.47) twelfth 18.43 (29.66) reverse 1.73 (2.79), 3.48 (5.60), 5.67 (9.13), 12.19 (19.62) Clutch wet multiple disc operated by foot pedal Brakes multiple wet disc operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 540 rpm at 2143 engine rpm and 1000 rpm at 2208 rpm Unladen tractor mass 9295 lb (4215 kg)

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers claim of 35% torque rise or 3 point lift capacity of 5850 lbs (2654 kg). The performance results on this summary were taken from a test conducted upder the OECD Code II Restricted Standard Test Code procedure.

# **DRAWBAR PERFORMANCE** **(UNBALLASTED—FRONT DRIVE ENGAGED)**

## **MAXIMUM POWER IN SELECTED GEARS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
4th (1B) Gear								
56.9 (42.4)	8590 (38.20)	2.48 (4.00)	2340	15.1	0.523 (0.318)	172 (78)	37 (3)	29.6 (100.3)
5th (2B) Gear								
62.2 (46.4)	7190 (31.98)	3.24 (5.22)	2104	11.9	0.488 (0.297)	178 (81)	37 (3)	29.6 (100.3)
6th (1C) Gear								
64.0 (47.7)	6220 (27.66)	3.86 (6.21)	2109	9.4	0.475 (0.289)	176 (80)	32 (0)	29.7 (100.5)
7th (3B) Gear								
62.9 (46.9)	5285 (23.51)	4.46 (7.18)	2099	7.9	0.483 (0.294)	176 (80)	37 (3)	29.6 (100.3)
8th (2C) Gear								
62.8 (46.8)	4175 (18.56)	5.64 (9.08)	2106	5.5	0.483 (0.294)	180 (82)	34 (1)	29.6 (100.3)

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Gear closest to 4.7 mph (7.5 km/h) 6th (1C) Gear	73.0	73.5
Maximum Sound level in 9th (3C) Gear	75.0	75.0
Transport speed—no load—12th (3D) Gear	74.5	...
Bystander	...	...

## **TIRES, BALLAST AND WEIGHT**

**Rear Tires**—No., size, ply & psi (kPa)

**Front Tires**—No., size, ply & psi (kPa)

## **Height of Drawbar**

**Static Weight with Operator**—Rear

—Front

—Total

## **Tested Without Ballast**

Two 16.9-38; 8; 12 (80)

Two 14.9-24; 8; 12 (80)

18.1 in (460 mm)

6030 lb (2735 kg)

3430 lb (1555 kg)

9460 lb (4290 kg)

## **THREE POINT HITCH PERFORMANCE (OECD Static Test)**

### **CATEGORY: II**

Quick Attach: None

Maximum Force Exerted Through Whole Range:

4900 lbs (21.8 kN)

i) Opening pressure of relief valve:

NA

Sustained pressure of the open relief valve:

2830 psi (195 bar)

ii) Pump delivery rate at minimum pressure:

18.0 GPM (68.2 l/min)

iii) Pump delivery rate at maximum

hydraulic power:

16.9 GPM (63.8 l/min)

Delivery pressure:

2465 psi (170 bar)

Power:

24.3 HP (18.1 kW)

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1524/2**, Nebraska Summary 156, September 23, 1994.

LOUIS I. LEVITIGUS

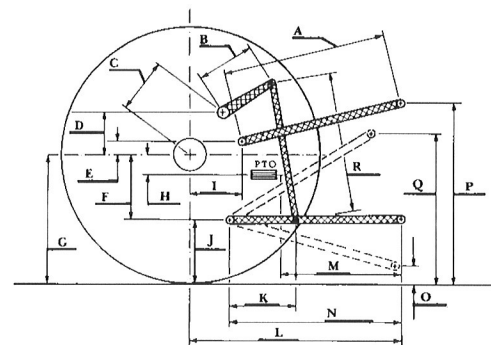
Engineer-in-Charge

R.D. GRISSO

M.F. KOCHER

K. VON BARGEN

Board of Tractor Test Engineers



## **HITCH DIMENSIONS AS TESTED—NO LOAD**

	inch	mm
A	26.0	660
B	12.0	305
C	19.9	505
D	18.7	475
E	6.8	173
F	8.9	225
G	31.3	795
H	3.1	80
I	17.8	452
J	22.4	570
K	19.8	503
L	42.5	1080
M	21.7	550
N	37.2	945
O	7.9	200
P	46.4	1180
Q	34.3	872
R	30.9	785